

On the Issue of the Management Paradigm and Improving the Methodology for Assessing the Level of Economic Security of an Economic Entity

E. Karanina¹ and N. Abasheva¹

¹Vyatka State University, Kirov, Russia

Keywords: Economic security, indicator approach, security risk assessment.

Abstract: The article examines problems of changing the management paradigm of business entities in the context of achieving security goals and influencing the state on its formation. The authors state that to create security conditions for an organization of any legal form and form of ownership, it is necessary to follow the purpose and value of a particular entity, which is strategically the foundation for its security. Having analyzed the experience of applying various methodological techniques to assessing the level of economic security of organizations, the authors suggest and substantiate an approach based on using calculated indicators (coefficients) of acceleration (deceleration) of quantitative values of economic security indicators. A specific example demonstrates the possibility and feasibility of the proposed technology for diagnosing the security state, proves the advantages of this assessment in the dynamics of the economic system.

1 INTRODUCTION

The problem of ensuring the economic security of entities at the level of theoretical research and implementing a risk-oriented mechanism in the activities of the primary link of the economy is currently based on a number of scientific approaches. Each approach is a certain stage in the development of scientific and practical thought within the framework of the considered question. According to the evolutionary method, we can distinguish the following conceptual approaches to managing an organization in the context of security problems:

- an informational approach based on the leading role of the information subsystem and, in many respects, ignoring other internal and external sources of threats;

- a defensive approach, which prioritizes the organization's readiness to confront current external threats, ignoring their dynamics and creating a preventive mechanism;

- an institutional approach providing the creation of a full-fledged environment for the functioning of an economic entity in a security mode, but at the same time transfers the center of gravity in decision-making in this area to the macro level;

- a competitive approach that motivates an organization to form such key success factors that allow to withstand competitive pressure or lead the market, but at the same time concentrate its efforts on creating competitive advantages, sometimes without taking into account other risks to economic security;

- a resource-functional approach (embedded in the definition of the "economic security"), it shifts the center of gravity in assessing this phenomenon solely on the factors of providing the organization with various types of resources and their effective use, which can often contradict the multifunctional role of security requirements as conceptual basis for the existence of an economic entity;

- a situational approach that focuses on the specific situation with variables affecting the activities of organizations, and is the foundation for using a set of methods for interpreting the situation. It is necessary for making decisions in the field of security, but at the same time, often putting the organization before choosing the priority of a specific functional safety subsystems to the detriment;

- a process approach, which determines the need to form a sequence of actions and operations, taking into account the target to ensure the safety of various subsystems of organizations.

Subsequently, the evolution in views on security issues led the scientific world to interpret this phenomenon from the standpoint of forming new paradigms in management, implemented on the basis of an integrated, systematic and strategic approach. However, despite their indisputable significance and applied value in the management of an organization with its focus on safety, there are methodological problems that require immediate solutions, confirmed by the low effectiveness of business entities in a safety mode.

The authors' analysis of theoretical studies and the assessment of the enterprises experience in different industries, made it possible to divide the existing methodological problems into 2 groups. The first group relates to the purpose of the functioning of the security system at the level of the primary link of the economy. The second one is a directly related assessment of the level of economic security of the organization. The solution of these methodological issues predetermined the goal and objectives of the study. Its novelty is determined, on the one hand, by a different strategic vision of security tasks at the micro-level, on the other hand, by the proposal of the author's model for assessing the safety state of business entities.

2 MATERIALS AND METHODS

Studying questions of the article was based not so much on the economic meaning of the concept "economic security", but on the emerging contradictions of its logical interpretation from the standpoint of cause-and-effect relationships. I.S. Yakshina in her works refers to a certain contradiction in the definition of this concept. In her opinion, "the phenomenon of economic security must be considered from the definition of its derivative - "economic danger". Without it, according to the dialectical approach, security cannot exist, therefore, cannot be chosen as the beginning of research. In modern Russian science, the concept of "security" is interpreted as a state when there is no danger. Danger is understood as some degree of threat. We believe that there can be no "state when there is no danger", since if there is an object, then there is a set of factors that threaten it" (Yakshina, 2013).

Studying this issue, the authors' purpose was not to carry out a philological examination of the concept,. But these conclusions made it possible to form a new conceptual approach to defining the place of the phenomenon "economic security" both for a specific market entity and for the state as a whole,

focusing on national security problems. According to the authors, the position of G.V. Ivaschenko should be taken into account. In his work "On the concept of security", he states that security is not a state of protection of the subject's interests. Security means conditions in which subjects preserve and reproduce their values (Ivashchenko, 2000). As a consequence, I.S. Yakshina offers the following interpretation of this concept: "ensuring economic security is the process of creating such conditions for the existence of economic entities, which imply not only the preservation and protection of a certain essential position, but also the creation of opportunities for entering a new, higher level development and prosperity in conditions of uncertainty and risk, since only development expands and strengthens internal potential" (Yakshina, 2013).

The question is who should create these conditions, who is the subject of forming security conditions? Starting from a systematic approach and taking into account that the security subsystem of an economic entity is inscribed in the general system of national security, it is necessary to place this problem for joint management of the organization and the state. At the same time, the role of the state should be realized not only in the context of creating a comfortable legal and other "field" for business, providing the conditions when decisions on creating a security system will be generated by each market entity. It is about the role of the state, which will subordinate these conditions, and, consequently, the activities of economic entities to a certain doctrine. Their essence is determined by the purpose of the given entity in the market. First of all, it is necessary to amend the current legislation. For example, the Civil Code, defining the purpose of a business entity in the market, orients the latter towards making a profit. Profit for a commercial organization is considered as the goal of its activities and a criterion of economic security. At the same time, profit or loss, as a category of economic science, is a financial result, which means that it cannot be a goal. There is a violation of cause-and-effect relationships.

The creation of security conditions proceeds from the purpose and value of a particular entity, which is strategically the foundation for its security. Taking into account the existing economic culture, which is emerging in the domestic market, such an ideological position should be formed by the state, proceeding from its own national security goals, subordinating them to the security goals of a particular market entity.

Let us give a specific example. The aim of commercial banks is to fulfill the transmission task in

the economy, directing free financial resources of enterprises and the population into the domestic economy, including investment purposes. A sharp decline in the share of lending, including investment lending, in active banking operations and an increase in income from speculative operations negatively affect the economic security of the state. However, given the significant growth in the banking sector's profits, we can speak of an increase in the security potential of the financial sector of the economy with the existing assessment methods. Thus, the strategically wrong accents and the infrastructure system begins to work for itself, in spite of its intended role in the national security system. Taking into account the requirements for building a security system in the state, there is a conflict: the goals (tasks) of a lower level (specific market participants) begin to conflict with the goals of a higher (national) level. Only the state can correct this situation, having clearly defined the target guidelines for building a system of economic security of economic entities.

Another component of the problems is the assessment of economic security at the micro-level. This issue is natural, since the process of making decisions on ensuring economic security begins with the diagnostic stage. Its effectiveness is determined by the methodological approaches and techniques that the analyst uses in this activity.

At present, with a wide variety of methods for diagnosing economic security systems of economic entities, the main application is methods of indicator assessment. Within this approach, the main questions are about the indicators used for diagnostic purposes and their thresholds. The most commonly used indicators are for assessing the financial condition and use of financial resources. According to some authors (Sergeeva, 2019, Karanina, Ryazanova, Gritsuk, 2018, Klychova, Zakirova, Dyatlova, Klychova, Zaugarova, Zalyalova, 2019), the most preferred indicators are for assessing liquidity, financial stability, turnover and profitability. On the basis of partial deviations from the threshold values, it is possible to get an integral indicator, while researchers offer different approaches to determining the weight coefficients (scores) that define the contribution of each indicator to the overall assessment of the level of economic security (Azarenko, 2017).

Another common approach to assessing the level of economic security is the approach tested in risk management technology. The variety of methods existing here can be summarized by qualitative and quantitative interpretation of risks. Some authors propose a methodology for integral risk assessment,

where the materiality of risk is taken as a weighting indicator (Aleksandrov, 2019). There are other approaches to assessing the level of economic security: an integrated approach that basically combines an indicator approach and an approach based on risk diagnostics; bankruptcy diagnostics and others.

However, practical experience with various methods does not give the analyst satisfying results. The main reasons of it are the following. First of all, such a widespread approach requires an objective selection of evaluation criteria for the organization's activities in the safety mode, and a set of indicators that determine each of the criteria. It is simply illogical to use here standard approaches without taking into account the specifics of the organization's activities. But the problem is associated with the threshold values of indicators, which, in some cases, should have a completely different meaning than the generally accepted one. For example, the autonomy coefficient for trade enterprises, and in some cases, it is simply impossible to establish threshold (normative) values. However, from a methodological point of view, the described situation is even more problematic.

For the stage of assessing the actual state of the economic security of an enterprise, using the indicator method is extremely convenient. It determines its widespread distribution. There are also information bases that allow to get the initial information. Its users can be third parties interested in the assessment, for example, creditors. But after all, analysis and assessment is the basis for planning, in this case based on a system of indicators. Unfortunately, in the practice of domestic enterprises, such planning often leads to "technocratic methods of correcting the values of indicators", substituting tactical decisions for the strategy of forming a system of economic security. Moreover, taking into account the frequency of forming credentials, the safety management process is more reminiscent of episodic decisions of a spontaneous nature to bring individual security subsystems into a stable state. Considering that the balance sheet data is a state of the organization on a specific date, which does not reflect the actual dynamics in the development of the system, it is necessary to switch to assessing the dynamics of indicators. It is also advisable for domestic enterprises to select those indicators which help to more clearly assess the state of security. Each industry needs its own threshold values of indicators, since the goal is to achieve an optimal level of safety. In the next section of the article, we substantiate these proposals giving an example of the financial

subsystem of economic security of the timber industry complex of the Kirov region.

3 RESULTS AND DISCUSSION

Improving the indicator assessment mechanism in order to analyze and monitor the financial subsystem of the economic security of enterprises, the authors proceed from the following provisions.

1. It is necessary to eliminate the separation of actual methods of assessing the financial condition and the values of indicators calculated on this basis from the calculation of performance indicators and risks of financial and economic activities, calculated on the basis of data of internal management accounting and strategic analysis of the environment (for example, analysis of strategic risks of financial activities, etc.).
2. It is necessary to make industry-specific adaptation of threshold values of indicators and their actualization, taking into account modern realities and adjustments to the concept of financial management. For example, if in the early 2000s the value of the financial leverage ratio exceeding 2 was considered critical, now a large number of organizations, especially public ones, demonstrate values that significantly exceed this indicator.
3. It is necessary to change the methodological approach to using threshold values of indicators, which should be based not on the level of

achievement of the desired value of the indicator, but on its dynamics. It is necessary to ensure proper correctness in the estimates of the financial subsystem of the organization due to the deterioration of the parameters of the external environment in conditions of deployment the global financial crisis and the consequences of the pandemic.

Let us illustrate this approach using the example of enterprises in the forestry and logging industry. Initially, the geometric mean formula calculates changes in the values of indicators for a set of financial indicators, the average industry values for which are determined on the basis of the consolidated statements of enterprises in the industry, for example, for the period 2014-2019.

For example, the calculation of the geometric mean by the current liquidity ratio is the following:

$$K = \sqrt[5]{1,1415 * 1,1554 * 1,1928 * 1,1679 * 1,1980} = 1,08$$

Calculations are made in the same way for the entire list of indicators selected for analysis. Let us call the obtained values the coefficients of acceleration (deceleration) of financial indicators.

Comparing the indicator of industry dynamics for the corresponding indicator with a similar indicator for the investigated enterprise, it is possible to determine the nature of the development of the hazard, or, on the contrary, strengthening the security potential of the enterprise to the basic level.

The table below summarizes the results of comparative calculations for the selected range of indicators for enterprises in the timber industry.

Table 1: Comparative table of the acceleration (deceleration) coefficients of the values of the financial indicators of the studied enterprise and the average values of the indicators for the enterprises of the timber industry.

Financial indicator	Acceleration (deceleration) coefficient for the enterprise	Acceleration (deceleration) coefficient for the timber industry	Deviation of the coefficient for the enterprise from the industry coefficient%	Assessment (impact on the state of economic security of the enterprise)
Financial soundness indicators				
Autonomy ratio	3,26	1,15	183	positive
Financial leverage ratio	0,4	0,85	-53	positive
Equity capital flexibility ratio	0,41	0,96	-57	negative
Solvency indicators				
Current liquidity ratio	1,81	1,08	68	positive
Quick ratio	1,81	1,03	76	positive
Absolute liquidity ratio	0,37	1,09	-66	negative
Profitability indicators,%				
Return on sales,%	1,7	0,92	85	positive
Return on assets,%	0,7	0,82	-15	positive
Return on equity,%	1,2	0,84	43	positive

Next, let us move to building a risk map based on the proposed improved indicator assessment method. Fig. 1 shows the map of financial security risks within the framework of the proposed methodology for comparing the acceleration (deceleration) coefficients of the values of the financial stability indicators of the studied enterprise with the values of the indicators for the timber industry. As it is seen, the coefficient of acceleration of the autonomy indicator in the enterprise is 183% higher than the industry

average. The company is increasing its financing of its activities from its own funds at a faster rate than the enterprises of the industry, which has a positive effect on the state and safety potential.

The deceleration coefficient of the capital maneuverability indicator shows that the capital of the studied enterprise is prone to immobilization compared to organizations on average in the industry. It will have a negative impact when comparing their security potentials.

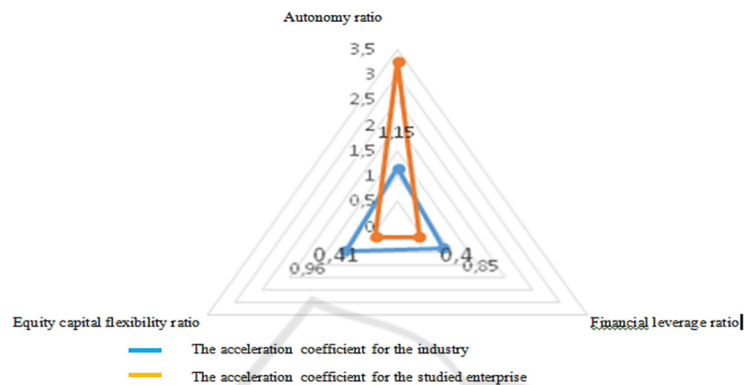


Figure 1: Map of financial security risks within the framework of the proposed methodology for comparing the acceleration (deceleration) coefficients of the values of the financial stability indicators of the studied enterprise with the values of the indicators for the timber industry.

Figure 2 presents a map of financial security risks within the framework of the proposed methodology for comparing the acceleration (deceleration) coefficients of the values of the solvency indicators of the studied enterprise with the values of the indicators for the timber industry.

increase in problems with instant solvency and cause serious risks from the standpoint of economic security

The acceleration coefficient for the current liquidity indicator of the enterprise is higher than the analogous coefficient for the industry in general. This means that the enterprise increases its prospective solvency every year. Enterprises in the timber industry do this at a slower rate.

A similar situation is observed regarding the acceleration factor for the quick liquidity indicator. The analyzed coefficient of the enterprise is 76% higher than the average for the industry enterprises. This determines great opportunities for the studied organization in comparison with the industry enterprises to repay short-term liabilities using the most liquid assets (cash and short-term investments), as well as timely collection of short-term receivables.

The opposite conclusion concerns the rate of deceleration of the absolute liquidity indicator. The deviation of this indicator for the enterprise in comparison with the coefficient of its acceleration for the industry in general is 66%, which may indicate an

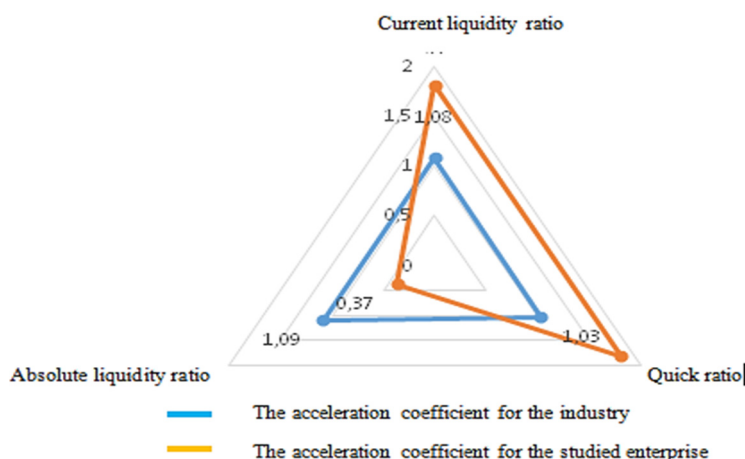


Figure 2: Map of financial security risks within the framework of the proposed methodology for comparing the acceleration (deceleration) coefficients of the values of the solvency indicators of the studied enterprise with the values of the indicators for the timber industry.

Next, we conduct a study of the acceleration (deceleration) coefficients of profitability indicators (within the selected set of indicators) for the studied organization and for the industry as a whole and illustrate it using the risk map in Figure 3.

The acceleration coefficients in terms of return on sales and return on equity in the studied enterprise are higher than the average for enterprises in the industry, which positively characterizes the commercial

subsystem and the potential for strengthening the economic security of the enterprise.

The organization invests its own funds more efficiently in production and economic activities in comparison with using its own funds in the forest industry as a whole. As for the rate of deceleration of the profitability of assets, we can conclude that the efficiency of using assets at the enterprise, in the presence of a downward trend in the industry as a whole, is much lower.

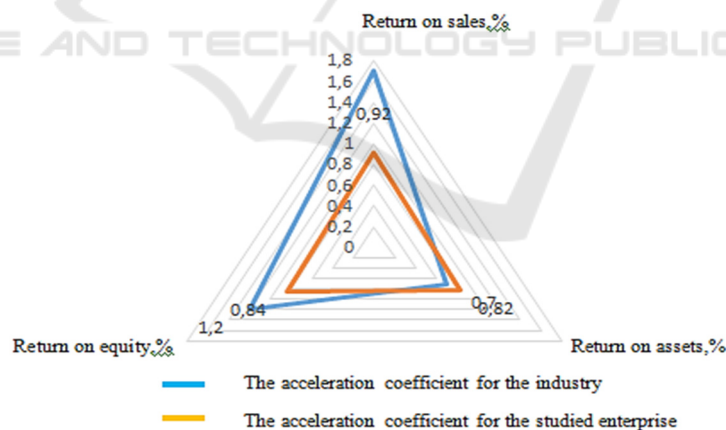


Figure 3: Map of financial security risks within the framework of the proposed methodology for comparing the acceleration (deceleration) coefficients of the values of the profitability indicators of the studied enterprise with the values of the indicators for the timber industry

4 CONCLUSIONS

The approach proposed by the authors allows a more correct assessment of the level of economic security

of the primary link of the economy, supplementing the traditional indicator approach with the introduction of calculated indicators (coefficients) of acceleration (deceleration) of quantitative values of indicators. The set of the latter is determined by the

analyst. This technology allows to solve the problem of the threshold values of indicators that are specific for each industry. On the other hand, it provides an opportunity to assess the state of safety in dynamics, and not to fix the fact of deviation from any standard value, the value of which is not always objective. Moreover, this approach allows to take into account the industry characteristics and the influence of the external and internal environment on the processes in the industry, which makes the conclusions more objective, and the decisions in the field of economic security realizable.

ACKNOWLEDGEMENTS

The article was prepared with the support of the grant of the President of the Russian Federation NSH-5187.2022.2 for state support of the leading scientific schools of the Russian Federation within the framework of the research topic «Development and justification of the concept, an integrated model of resilience diagnostics of risks and threats to the security of regional ecosystems and the technology of its application based on a digital twin».

REFERENCES

- Azarenko, N. Yu., 2017. Application of the system-target development model in assessing the economic security of an economic entity. *In International scientific research journal*. 10(64). 2. pp. 70-74.
- Aleksandrov, G. A., 2019. Economic security and investment attractiveness of enterprises: the nature of the relationship and the problem of assessment. *In Economic relations*. 9(3). pp. 2269-2284.
- Ilysheva, N., Karanina, E., Baldesku, E., Zakirov, U., 2017. Detection of the Interdependence of Economic Development and Environmental Performance at the Industry Level. *In Montenegrin Journal of Economics*. 13(4). pp. 19-29.
- Ivashchenko, G.V., 2000. On the concept of "safety". *In Theoretical journal CREDO*. 24.
- Karanina, E., Ryazanova, O., Gritsuk, N., 2018. Conceptual approach to the assessment of economic security of economic entities on the example of transport enterprises. *In International Scientific Conference Environmental Science for Construction Industry – ESCI 2018 MATEC Web Conf. 20 August 2018*. 193. p. 8.
- Karanina, E., Kartavyh, K., 2017. Economic security of modern Russia: The current state and prospects. *In MATEC Web of Conferences: 2017 International Science Conference on Business Technologies for Sustainable Urban Development (SPbWOSCE 2017), St. Petersburg, 20-22 December 2017*. p. 170.
- Karanina, E. Yurieva, L., Dolzhenkova, E., 2018. Assessing the innovative attractiveness of industrial companies in the conditions of high uncertainty. *In Espacios*. 39. 28.
- Klychova, G., Zakirova, A., Dyatlova, A., Klychova, A., Zaugarova, E., Zalyalova, N., 2019. Methodological tools to ensure economic security in the personnel management system of enterprises. *In Innovative Technologies in Environmental Science and Education (ITESE-2019) E3S Web Conf. 04 December 2019*. 135. p. 13.
- Sergeeva, I.A., 2019. Analysis of methodological approaches to assessing the economic security of an enterprise. *In Modern economy: problems and solutions*. 8 (116). pp. 64-78.
- Yakshina, I.S., 2013. Modern theoretical approaches to the content of the category of economic security of subjects of economic activity. *In Humanitarian research*. 10.